

REMARKS

Claims 1-2 and 4-9 are pending in the present application. Claim 1 is the only independent claim.

In the Office Action, claims 1 and 5-9 remain rejected under 35 U.S.C. 103(a) as obvious over US 6,400,433 to Arakawa et al. ("Arakawa") in view of US 6,657,690 to Hashimoto ("Hashimoto") and further in view of US 6,773,766 to Meyer et al. ("Meyer"), claim 2 remains rejected under 35 U.S.C. 103(a) as obvious over Arakawa in view of Hashimoto and Meyer, and further in view of US 6,685,998 to Nishikawa et al. ("Nishikawa"), and claim 4 remains rejected under 35 U.S.C. 103(a) as obvious over Arakawa in view of Hashimoto and Meyer, and further in view of US 6,580,483 to Suzuki et al. ("Suzuki").

It is alleged in the Office Action that there would have been a motivation to combine Arakawa and Hashimoto because Arakawa discloses "an optically compensating B-layer (element A) comprising a cholesteric liquid crystal layer" (see Office Action at page 3).

The rejections are respectfully traversed. Contrary to the assertions made in the Office Action, Arakawa fails to teach or suggest a cholesteric liquid crystal layer, so that there would have been no motivation to combine the references as alleged in the Office Action, and no combination of these references would have resulted in the presently claimed invention.

An objective of the presently claimed invention is that it is possible to optically compensate a VA mode liquid crystal cell preferably.

Thus, in the presently claimed invention, the polarizing plate with an optically

compensating function comprises (i) a polarizing layer, (ii) an optically compensating A-layer comprising a polymer film, and (iii) an optically compensating B-layer comprising a cholesteric liquid crystal layer, as recited in present claim 1.

More specifically, the optically compensating A-layer has $20 \text{ (nm)} \leq R_e \leq 300 \text{ (nm)}$ (formula (I)) and $1.2 \leq R_{th}/R_e$ (formula (II)), as recited in present claim 1. When these formulae (I) and (II) are satisfied, the relationship of the refractive indices are $n_x > n_y > n_z$, namely, the layer is an optically biaxial film.

Further, the optically compensating B-layer is a cholesteric layer formed of a rod-like liquid crystal having a specific structure and a chiral agent having a specific structure, namely, the liquid crystal monomer of formula (10) and the chiral agent of formula (38), as recited in present claim 1. When the optically compensating B-layer is a cholesteric layer, it has a relationship of relationship of refractive indices of $n_x = n_y > n_z$, namely, the optically compensating B-layer is a negative C-plate.

In other words, in the presently claimed invention the polarizing plate with optically compensation function includes (i) a polarizing plate, (ii) an optically biaxial film (optically compensating A-layer), and (iii) a negative C-plate (optically compensating B-layer).

As indicated above, an advantage of the presently claimed invention is that it is possible to optically compensate a VA mode liquid crystal cell preferably.

In contrast, Arakawa and Hashimoto disclose layers formed by aligning discotic liquid crystal molecules at inclined angles with chiral agents (see, e.g., claim 1 of Arakawa and claim 2

of Hashimoto). However, a layer formed by aligning a discotic liquid crystal molecule at an inclined angle is not a cholesteric layer. More precisely, the layer does not have the relationship of refractive indices of $n_x = n_y > n_z$, and thus, it cannot result in a negative C-plate. Thus, a layer formed by aligning a discotic liquid crystal molecule will not have a spiral structure even by aligning at an inclined angle with a chiral agent.

In particular, in the Office Action, it is alleged that Arakawa suggests a cholesteric structure because it mentions “rod-like liquid crystal molecules” at col. 12, lines 21-23 and “chiral agent” at col. 20, lines 32-35 (see Office Action at page 7). However, the discussion of a “chiral agent” at col. 20, lines 32-35 of Arakawa is specific to the discotic liquid crystal molecules and not to rod-like liquid crystal molecules. Thus, Arakawa uses its chiral agent only with the discotic liquid crystal molecules. Therefore, when Arakawa discusses the chiral agent, it does not refer to the rod-like liquid crystal molecules.

More specifically, a layer formed by using rod-like liquid crystal molecules alone, as disclosed in Arakawa, will make an optically compensating layer exhibiting a characteristic of $n_x > n_y > n_z$, namely, a positive A-plate, which is not a cholesteric layer. Further, a layer formed by using discotic liquid crystal molecules and a chiral agent, as also disclosed in Arakawa, will make a biaxial film exhibiting a characteristic of $n_x > n_y > n_z$, which is also not a cholesteric layer.

Because the rod-like liquid crystal molecules of Arakawa cannot be combined with the chiral agent of Arakawa, Arakawa does not provide any motivation to use a cholesteric liquid crystal layer, so that there would have been no motivation to combine the references as alleged in

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the Office Action and any such combination would not have included a cholesteric liquid crystal layer.

In summary, there would have been no motivation to combine the cited references as alleged in the Office Action, and any combination of the cited references would not have taught or suggested the presently claimed invention or its advantages.

In addition, both Arakawa and Hashimoto are silent regarding a laminate of an optically biaxial film and a cholesteric layer (negative C-plate). Therefore, for this reason also, no combination of the cited references teaches or suggests the presently claimed invention or its advantages.

In view of the above, it is submitted that the rejections should be withdrawn.

In conclusion, the invention as presently claimed is patentable. It is believed that the claims are in allowable condition and a notice to that effect is earnestly requested.

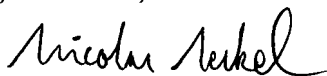
If there is, in the Examiner's opinion, any outstanding issue and such issue may be resolved by means of a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number listed below.

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If this paper is not considered to be timely filed, the Applicants hereby petition for an appropriate extension of the response period. Please charge the fee for such extension and any other fees which may be required to our Deposit Account No. 50-2866.

Respectfully submitted,

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